DOCUMENT RESUME

ED 051 216 SP 007 315

AUTHOR Muller, Robert M.

TITLE Adaptive Physical Education.

INSTITUTION Bensalam Township School District, Cornwells

Heights, Pa.

PUB DATE NOV 70

NOTE 46p.

EDRS PRICE EDRS Price NF-\$0.65 EC-\$3.29

DESCRIPTORS *Curriculum Guides, *Elementary School Curriculum,

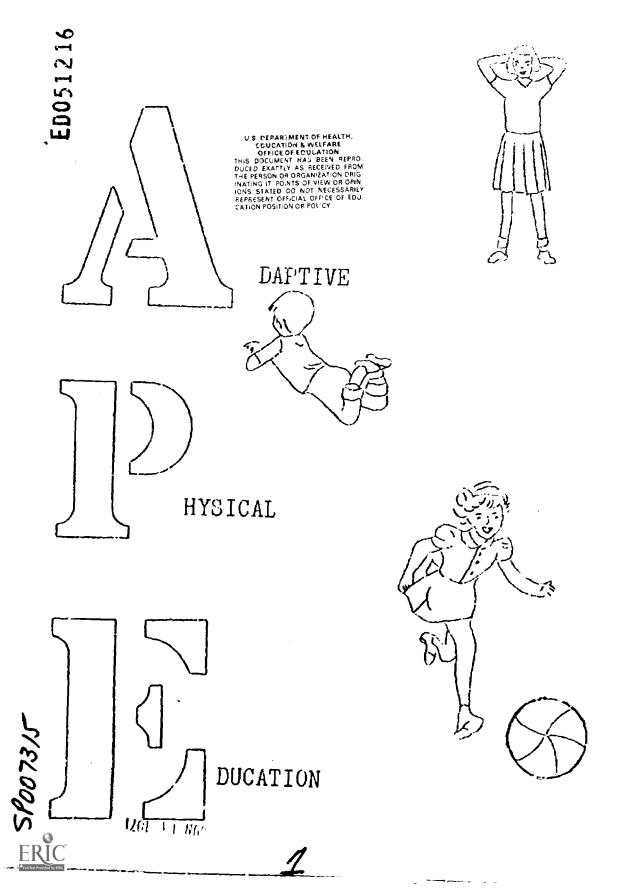
Handicapped Students, *Physical Education,

*Physically Handicapped, *School Health Services

ABSTRACT

GRADES OR AGES: Elementary grades. SUBJECT MATTER: Adaptive physical education. ORGANIZATION AND PHYSICAL APPEARANCE: The aims and objectives of the program and the screening procedure are described. Common postural deviations are identified and a number of congenital and other defects described. Details of the modified program are given. There is a glossary of terms and samples of letters to physicians and parents in connection with the program. The guide is mimeographed and spiral bound with a soft cover. OBJECTIVES AND ACTIVITIES: The objectives are briefly outlined at the beginning of the guide. Specific exercises and activities are listed for the various physical deviations. INSTRUCTIONAL MATERIALS: There is no information on materials. STUDENT ASSESSMENT: No provision is made for evaluation. (MBM)





FOREWORD

We believe all students should participate in a planned program of physical education. It is the ultimate goal of the Adaptive Physical Education Department to provide every student with such a program,

Adaptive Physical Education can offer helpful services to handicapped students so they can live and function more effectively. All students attending school should have the opportunity to achieve a maximum of growth and development. Adaptive Physical Education is mandated in Pennsylvania public schools. The Bensalem Township School District has initiated an Adaptive Physical Education Program as an integral part of their Comprehensive Educational Program so that every child may participate to his potential.

Mr. Robert M. Muller, Adaptive Physical Education Instructor, is to be commended for his work in providing this course of study. This material is only tentative and will be changed as the need arises.

John E. Reed Assistant to the Superintendent Instructional Services and Research

November, 1970



-i-

PHILOSOPHY

Physical Education is that part of the total educational program which proceeds by means of, or predominately through, physical activity. It is not separate from or only partially related to the more formal instructional phases of the school. This significant means of instruction furnishes a wholesome approach to the aducation of the whole individual. The mental and emotional, as well as the physical and social being of the student must be considered in the formulation and implementation of a good program. Physical education can contribute to all the primary goals of education.

Physical Education in the Bensalem Elementary Schools is intended to be a program that will provide all students with the means for proper physical, mental, emotional, and social development and contribute to the preparation of each for his life in the years beyond school. The program is built upon the needs, personal and social, of the individual and the group. As such, it permits each student to progress at his level of ability.

The Landicapped child is entitled to a complete educational program. To provide for his limitations a planned program of corrective exercises, games, and other activities suited to his capacities, interests, and limitations will be inaugurated.



- ii -

TABLE OF CONTENTS

Aims and Objectives	1
The Programs	1
Personnel Involvement with Adaptive Physical Education	3
Screening	4
Postural Fitness Summary Sheet	7
Adaptive Physical Education Screening Form	8
Iden'ification of Common Deviations	Ģ
Posture Evaluation Charts	
Rear View	10
Side View	11
Common Postural Deviations	12
Factors Causing Poor Posture	12
Modified Program	13
General Values of Exercises	18
Specific Exercises for Remedial Program	19
Public Relations	31
Bibliography	32
Glossary	33
Physician's Certificate Letter	38
Physician's Check List	39
Letter to the Parents	40
Letter to the Physician	41



AIMS AND OBJECTIVES

The overall aim of Adaptive Physical Education is the same 23 that of other disciplines - the maximum development of each student within his own capabilities.

It is the aim of the program to enable every student to participate in some part of the physical education program.

OBJECTIVES

- 1. To enable each student to understand his physical potentialities as well as his limitations.
- 2. To help each student correct his physical handicaps and improve his posture mechanics.
- 3. To help each studer attain success in the activities of the program.
- 4. To enable each student to participate safely in planned correctional exercise programs, sports, and games.
- 5. To develop the sociability and self-esteem of each student in the program.
- 6. To offer activities constituting worthy pursuit of leisure time.
- 7. To extend the elementary physical education instruction program.
- 8. To help stimulate interest and increase motivation toward fitness activities.

THE PROGRAMS

A. Modified

The modified program consists of activities selected from the regular physical education program (as much as possible) and modified for a particular student.

The modified program should be an integrated part of the regular physical education program whenever possible. Special classes should be established only when the following exists:

- When the handicapped child cannot take part in the regular physical education program.
- 2. When the regular class cannot provide the improvement of skills in physical education.



THE PROGRAMS

A. Modified - Continued

3. When the regular class is detrimental to the social and psychological adjustment of the student.

The modified program may include children that are obese, undernourished, and post-operative. Students with cardiac problems, emotional problems, congenital defects, asthma, and visual disorders may also be included in this type of program. (These disorders are explained in a later section of this guide.)

B. Corrective

The corrective program consists of the scientific use of exercises and specific body movements in order to restore normal strength and range of movement in an affected hody part. This program will correct and alleviate identifiable postural defects. (Some common postural deviations are listed in a later section of this guide.)

C. Responsibility for Implementation of These Programs

The modified program in grades K-5, should be handled by the individual physical education teachers working in conjunction with the adaptive physical education teacher. The adaptive physical education teacher should outline programs and activities for the students based upon the recommendations of the family physician. The school nurse should provide the adaptive physical education teacher with a complete list of students evidencing dischilities requiring a modified program.

The corrective program will be handled by the adaptive physical education teacher based upon results of the posture screening evaluation and recommendations from the family physician.



- 2 -

PERSONNE'L INVOLVEMENT WITH ADAPTIVE PHYSICAL EDUCATION

A. School Personnel

- 1. Physical Education Teachers
 - a. Review health records of students, memos, parents' notes, and doctors' notes.
 - b. Refer students who evidence a need for a special program in adaptive physical education to teacher.
 - c. Refer students to school nurse.
- 2. Classroom Teachers
 - a. Observe and record unusual behavior or mannerisms in the students.
 - b. Refer students with unusual behavior to school nurse.
- 3. School Nurses
 - a. Review health records of all students.
 - b. Aid in student posture screening.
 - c. Written and verbal communication with parents, teachers, and physicians.
- 4. School Physicians
 - a. Report observations and recommendations made during scheduled student health examination: in grades K and 1. (Recorded by nurse on student health record.)
 - b. Conduct special examinations requested by the adaptive physical education teacher with consent of pupil's parents.

B. Student's Family Physician

- 1. Recommended appropriate modified and/or corrective activities for the student.
- 2. All students participating should have the appropriate family physician's lotter in their adaptive physical education folder.



PERSONNEL INVOLVEMENT WITH ADAPTIVE PHYSICAL EDUCATION

G. Parents of Students

- 1. Report pupil injuries or illnesses to school authorities.
- 2. Have pupil examined by the family physician after results from posture screening and health records indicate the need of some specialized physical education program.
- 3. Consent to place students in an adaptive program after recommendations from adaptive physical education teacher and medical diagnosis.

D. Students in the Program

- 1. Work to alleviate postural deviations and physical handicaps through the utilization prescribed activities.
- 2. Keep a record of the kinds of exercises and the number of repititions for each exercise prescribed.

SCREENING

A. Organization

The execution of the screening program should be at the convenience of the school's existing programs in regular physical education and health. The specific details of the posture screening as to time and place will be left to the discretion of the Building Principal.

All students in Kindergarten and first grade will be screened by the school doctor during regular physical examinations.

All students in grades two through five will be screened by the use of medical files in the nurse's office and a posture screening evaluation ad ministered by the elementary physical education department.

Screening will be used for the purpose of placing student in either the corrective (remedial) or the modified program.



SCREENING - Continued

B. Procedures - General

- 1. Maintain the student's personal dignity during the screening process. Since boys and girls are required to partially disrobe, it is necessary that every precaution be taken to prevent embarrassment to them.
- 2. School nurses and women physical education teachers will be responsible for examining all girls.
- 3. We will honor letter from parents requesting their child not to participate in program.
- 4. Appropriate clothing should be worn on the day pupils are screened. Parents will be notified prior to the day of screening.
- 5. A schedule will be planned with the Building Principals for the screening test.

C. Procedures - Individual

- 1. Good general posture is indicated when a line runs from the ear through the middle of the shoulder joint, through or just back of the center of the hip joint, down through the knee and to the front of the ankle joint. This is good posture when viewed laterally or from the side.
- Viewed anteriorally or posteriorally good posture is indicated when a line runs from the head to the floor with both sides of the body nearly symmetrical. (Look for tilted head, high or low hip or shoulder, curved spine, and flared heel cord.)
- Check for overweight, underweight, wry neck, and pronated feet.
- 4. Have students walk to a given point, bend forward, and allow hands to reach toward toes. (This is to check gait and flexibility.)



SCREENING · Continued

Useful Facts About Posture

When children first stand and start to walk, their weight is frequently on the inner borders of the foot rather than the entire foot.

Round shoulders often appear at periods of rapid growth and frequently disappear later. Shoulder blade winging is fairly common at ages six to nine years.

A prominent tummy and sway back are considered normal in a growing child. A flat abdomen does not appear until fourteen or sixteen years of age.

A hearing less in one ear or lack of vision in one eye will sometimes result in a postural deviation.

A relexed posture is often an indication of poor self-confidence.

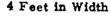
D. Equipment and Facilities

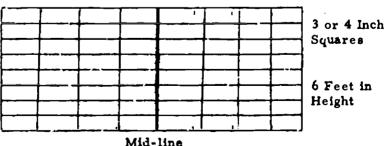
A posture grid and plumbline are recommended for any posture screening. Black tape may be substituted for the posture grid. The tape should be placed on the walls or on back of the doors in existing nurse's office.

Since boys and girls will be screened at one time, there should be two specific areas for the screening.

Posture Screen

This grid screen may be made by using one inch or one-half inch adhesive tape. The tape works well on any type surface. Portable grids can easily be made by painting lines or placing tape on cardboard or clear paper.







- 6 -

POSTURAL FITNESS SUMMARY SHEET

School	-							th.										
Class Period	-	Aypnosis Lordosis	Scoliosis	Hamstrings		re .	ads	Abdominal Strength	Abdominal Streng Ankle Flexibility	8	휲	Adipose Tissue	ht		fotion	tpula		
Date - Year	Kyphosis				Posture	Foot Posture	Knees & Quads			t Defec	Arm Strength			ght	Range of Motion	Winged Scapula		
Examiner	- X	L	Scol	Han	Pos	Foo	Kne	Abd		Foo	Arn	Adi	Hei	Weight		Ι.	ட்	
Name	i	2	3	4	5	6	7	8	9	10	1	12	13	14	15	16	17	
	-	\vdash	L	Ц			Н	Н	Н		L	Н	Н		Ľ	┝		L
	-+	-	-	H	\vdash	-	Н	-	\vdash	_	H	Н	_	\vdash	\vdash	<u> </u>		┝
	\dashv	十	-	\vdash	\vdash	\vdash	H	H	Н	H	H	H		\vdash	\vdash	\vdash	H	┢
		T																
																		L
-		L	_	L			L				_	L	_	ļ_	Į_	_	_	ļ_
		╀	L		 _	_	_	-	ļ	<u> </u>	_		-	┡	⊢	┡	 	L
		╁	L	\vdash	-	⊢	H	\vdash	H	┝		H	┝	-	┝	┝	 - -	┝
		╆	H		\vdash	┝	\vdash	┢	┝	\vdash	\vdash		\vdash	 	┢	┢	\vdash	H
	-	T	-	Т	H	一		H	H	Г		Г	一	Г	┢	T	T	
																		L
	\perp	L	L		_	L	L	<u>_</u>	L_	L	╙	Ļ	L	<u> </u>	┡	L	L	Ļ
	\dashv	╀	_	\vdash	H	-	_	L	 -	-	┞	-	┡	┝	₽	┝	┞	╀
	-+	╀	-	├	⊢	┝	┝	-	┝	┝	├	H	┞	┞	⊢	┝	╁	┝
	\dashv	╁╴	+	-	-	一	- -	-	\vdash	\vdash	 - -	-	\vdash	┪	T	†-	十	t
	十	t	T	t	T	一	Г	T	T	一	H	T	t^-	1	T		Г	T
															Γ		L	L
	\bot	\Box					Ĺ						Ĺ	<u> </u>	\perp	\perp	L	L
	 -	1	┞-	L	L	L	L	L	ļ_	┞	lacksquare	ļ_	L	Į.	 	╀	 	┞
		╀	}	-	-	╀	-	┡	╀-	 	├ -	├-	╀	╀	╀	╀	╀	╀
	-	╁	╁	┝	-	+-	├-	┝	╁╾	-	├	┝	╁	╁	╁	╁	 - -	H
		+	┞	┢	╁	十	┢	┢	╀	\vdash	十	┢	╁╴	✝	†	T	十	t
	十	T	✝	T	t	T	T	H	T	T	t	1	T	厂	T	T	T	T
 -		+-	+	1	+-	† 	1	1 –	1 -	1	1	+	† -	1	1	1	T-	1

Scale:

- 5 Severe
- 4 Moderate
- 3 Mild
- 2 Tendency
- 1 Normal

-7-

11



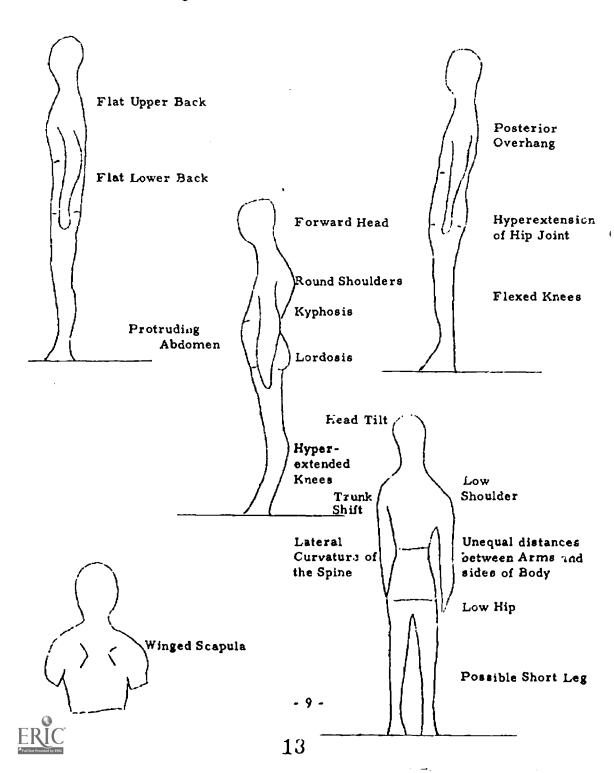
ADAPTIVE PHYSICAL EDUCATION SCREENING FORM

School														Da	te				
			···						_										
Directions:		Γ		Γ	Γ	Π	Γ			Ī				Ī	Π	Ī			Į
Mild - 1	Names	ł	[I		ĺ		ł	ł	i							ĺ	l	ſ
Moderate - 2	뙶	l	l	l	1		-	ĺ		l	•	l				ļ	Į	l	l
DCVCZE - J	<u>z</u> _	$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}$	L	L	L	_	1			L	L	L	_		L	L	<u> </u>	L	1
Assume Normal Posture	İ		-	Ì		1													1
A. Anterior View	士	L		Ė								乚							İ
Al. High Hip	_l_			_	L	L	J_			L.	\mathbb{L}_{-}	L		_	<u> </u>	L		L	I
A2. Pes Planus (Flat Feet)	\perp													L	L			L	I
A3. Low Shoulder						L													I
A4. Other			L	Ĺ.	L	ļ	ļ.	L .		-	<u> </u>	_	_		L	_	ļ- i	_	ļ
B. Lateral Yiew				ĺ															
Bl. Forward Head	T																	Ĺ	J
B2. Round Shoulders	T						T-												Ī
B3. Kyphosis	T						Γ			Г									1
B4. Lordosis	Т																		i
B5. Abdominal Ptosis (Lowering	7						Ţ												Ì
B6. Hyperextended Knees							\Box]
B7. Arms Overhead (Pectorais)	Ţ.,																		ļ
C. Posterior View							l												
Cl. Scoliosis	1	М	П		1		M						_		П				t
C2, Winged Scapula	1	П			Г		Τ.	П	_				_		Г			<u> </u>	İ
C3, Achilles Deviation	1	П				-	ŤΤ									\Box			İ
C4. Other	丰			L.															ļ
D. Gait Analysis	\perp											L							
E. Low Fitness or Strength																			
F. Medical History										:								;	I
Fl. Heart	+	† 1	H	-	Н		┢	Н		П	_	H	_	Н	Η	\vdash	Н		1
F2. Post-Polio	Ť	П	П				1			Π			_	Т	\vdash	_			İ
F3. Post Operative	\top	M	П					П											İ
F4. Cerebral Paley	十	П	П			Г	Г	П			_		_	Г		П			İ
F5. Epilepsy	- -		П			Γ		П	П	П				Г		П	П		į
F6. Asthma	寸一	ĪΤ	П				Γ	П		П	Т	П	П		П	П	П		ı
F7. Diabetes	\top	П			П			М	Н		_			Γ				Г	ţ
F8. Dermatalogic	Ť	M												Г	Г	П			Í
F9. Emotional	十	М	П	П	П	Г	Γ	П	М	П	_			Г	П	П	П	Г	1
F10.Other																			İ
••		T	9 2 6	ጉከራ										c.					

12

Identification of Common Postural Deviations

The segments are balances in a zigzag pattern rather than directly above the segment below.



Posture Evaluation Chart - Par	ent to take to Doctor
	e Grade M F
Last First M.	
Age U+ W	Leg Length L R
Age Ht. We	Biceps Cir. L R Thigh Cir. L R
11 00 10 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 20 20 20 20 20 20 20 20 20 20 20 20	Calf Cir. LR
5 4 3 2 1 0 1 2 3 4 5	Handedness L R
	Head Tilt - Nor. Mild Mod. Sev.
	R
	L
- 	Shoulder Level
	Higher (R) Lower
 - - - 	Higher (L) Lower
	Upper Spine
	(R) Curve
\\\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\	(L) Curve
	Shoulder Blade -R
	L
	Lower Spine
	(R) Curve
	(II) Ourve
	Hip Level
	Higher(R)Lower
\-\{-\{\}\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Higher(L)Lower
	Legs -Knocknee
+\	Bowed
	Poplitual Line
	Popliteal Line (R) Lower
	(I.) Lower
	(a) (a) (a) (a) (a) (a) (a) (a) (a) (a)
<u> </u>	Pronation -R
	L
	Ribs
	(R) Prominent
	(L) Prominent
	Grip Strength LR
	Skinfold Thickress
 - - -	Abdomen
- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Chest
FRIC	- 10 - Arm
Profit text Provided by Click	. Back
Rear View	14

	·			
3 2 1 0 1 2 3 4 5		Nor.	Mild	Mod.
	Head Forward			
	Backward			
	61 - 11-4			
	Shoulder Cupping			
				-
	Shoulder Blade Winging			
	•			
 -	Upper Spine Curvature			
	Cuivature			
	Lower Spine			
	Curvature			
	Hip Flexion			
	Hypereriension			
	Body Forward			
	Backward			
	Bowed			
 	Arch			
	Depression			
	Knee Flexion			
	Extersion			
				
 	Physician's Note	· The	ese for	ma wil
	dicate our result	s fron	n the p	osture
	screening evalua			
	forms back to the with your evaluation	tion fo	rm wh	en the
 	gram gets under			
	- 11 -			

COMMON POSTURAL DEVIATIONS

A. Standing Position

- 1. Slump of body weight over one hip and one leg.
- 2. Slouched and relaxed position exaggerating normal curves of the body.
- Strain on lower back and relaxation of the abdominal muscles.
- 4. Lateral curvature of the spine.
- 5. Contraction of the thoracic muscles and a forward thrust of the shoulders of boys caused by thrusting hands in pockets.

B. Walking

- 1. Shuffling along with head forward, feet turned out with the entire body presenting a picture of fatigue.
- 2. Poor aesthetic appearance of the body.

C. Sitting Position

- 1. Students frequently sit in a slumped position which causes fatigue on the underveloped muscles and compressions of the growing bones.
- 2. Poor lighting conditions or poorly fitted furniture causes slumping forward or twisting of the body.

D. Need for Posture Training

- 1. Prevent the progress of improper postural habits that may lead to more serious conditions.
- 2. Show how correct posture influences the life of every individual by increasing muscular efficiency and enhancing personal appearance.

FACTORS CAUSING FOOR FOSTURE

- A. Congenital Deformities
- B. Malnutrition
- C. Improper clothing and shoes
- D. Improper muscular development



- 12 -

FACTORS CAUSING POOR LE - Continued

- E. Poor health habits
- F. Chronic fatigue
- G. Incorrect walking, sitting, and standing habits
- H. Defective vision and hearing
- I. Incorrect Physical environment (furniture, lighting, and in certain cases, occupation.)

MODIFIED PROGRAM

The modified program will be the responsibility of the regular physical education teacher, and the adaptive physical education teacher. As a rule, activities are selected from those which are the most appropriate for various age groups of normal children. The difference lies in the application and conduct of these activities.

A. General Principles for Modifying Activities

- 1. Do not adapt the fun out of the game.
- 2. Adaptations should be made to suit the physical abilities rather than disabilities.
- 3. The student will make many of his own adaptations or modifications, allow him to experiment and proceed at his own speed.
- 4. It is better to underdo rather than overdo.
- 5. Keep in mind the student may have some fear of new experiences.

B. Methods of Modifying Games

- 1. Reduce the size of playing area in order to restrict amount of movement necessary.
- 2. Use lighter equipment.
- 3. Sit or lie down rather than stand up -- walk or crawl rather than run.
- 4. Slow don a maying objects -- bounce, roll, make stationary, use partially inflated balls.
- 5. Provide additional rest periods.
- 6. Modify the rules.



C. Equipment Available in the S. K. Faust Elementary School

Peg Loards Horizontal Ladder Pully Weights (with attachments) Dumbells Side Horse Chir-Up Bar Parallel Bars Games -- Available Balance Beam Checkers Mild Exercise Chess Gymnastic Equipment Quoits

D. Equipment -- Corrective Frogram (see specific exercises)

- 1. Posture Training Mirrors
- 2. Bar Bells
- 3. Aldominal Board 4. Weight Bench
- 5. Knee and Abdo inal Board
- 6. Stall Bar Ber ..es
- 7. Posture Grids

Equipment -- Modified Program

- 6. Golf 1. Bowling
- 2. Badminton 7. Horseshoes
- 3. Archery 8. Croquet
- 4. Table Tennis 9. Swimming 5. Shuffle Board 10. Darts

E. Programs for Specific Impairments

1. Obesity

This condition is becoming an increasing problem in this country. The more sedentary life we lead results in a caloric imbalance. A caloric imbalance results in an increase in weight.

To lose weight we have a choice of diet (lower caloric intake) or exercies (higher caloric expenditure.)

The best type of exercise in helping to control weight is that which engages the entire body such as running or swimming.

· Exercise of specific muscle groups to lose weight in specific body areas has proven inconclusive.

Diet and exercise have both a role in weight control. Even in cases where exercise has not resulted in significant weight loss, it has redistributed the weight to improve posture. appearance, and physical fitness. - 14 -18



2. Low-Fitness (Undernourished)

Low fitness usually occurs in one of three areas of basic physical fitness; namely muscular strength, muscular endurance, and circulatory-respiratory endurance.

The causes for low-fitness are numerous, some are:

- a. Physical Disorders
- b. Faulty Nutrition
- c. Poor Health
- d. Lack of Muscular Activity
- e. Psychological Reasons

An exercise program for this type of student should be adapted to the individual's exercise tolerance without undue discomfort. The student should or must be pushed beyond his customary performance level in order to develop strength or endurance.

The development of the student should be measured. There should be provisions for self-testing activities.

Circuit training is another type of program for low-fitness students. This is a system of exercising at specific areas or stations to achieve certain conditioning results.

3. Asthmatic Child

This child suffers from a form of allergy (a physical reaction of some people to substances which are harmless to other people.)

Most asthmatic children are in poor physical condition compared with their peers. Their posture may be poor. Exercise can, in some cases, precipitate an asthma attack.

Since asthmatic children are frequently weak, the physical education program should include activities to help improve muscle strength. It is also necessary that the program include activities to improve circular-respiratory endurance.

There should be a gradual entry into exercise with slow increases in intensity. All unnecessary exercise should be avoided during active attacks.

The benefits of physical exercise, both physiological and psychological, are just as important to the asthmatic child as to the normal child.

4. Congenital Defects a. Spina Bifida

This defect is a malformation of the spine in which the posterior portion of the bony canal containing the spinal cord is lacking because of failure of the vertebral laminae to develop or fuse.

The most serious form is when the cord and membranes protrude through the defect and form an external systic tumor. The tumor is filled with cerebrospinal fluid and it tends to increase in size because of fluid accumulation. The cause is unknown.

Physical activity must be limited to things done on a stretcher while laying on the stomach.

h. Hydrocephalus

A condition in which the amount of cerebrospinal fluid is increased greatly above normal. If the fluid is not absorbed the head becomes increasingly larger. Causes are unknown. Brain damage usually accompanies the problem since the brain cannot grow due to the fluid. Protection of the head is vital in any physical activity.

c. Microcephalus

A condition in which the brain is extremely small. The head itself is usually not over sixteen inches in circumference. Interests shift rapidly, but they are usually alert and vivacious. Intelligence is usually low, varying from high idiocy, low imbecility, and in some cases moron level.

d. Congenital Dislocation of the Hip

This condition is a prenatal displacement of one or more bones of the hip from the normal position. It is usually characterized by an upward and backward displacement of the head of the femur as well as a thickening at the base of the acetabulum.

If the hip dislocation is unilateral, the individual has a lurching walk in which he appears to sink down on the affected side as weight is borne on that leg.

General non-weight bearing conditioning exercises are suggested. Sports and games requiring no standing or use of lower limbs should be encouraged.

e. Torticollis (Wry Neck)

A condition in which the neck is twisted and the head is tilted to one side. Treatment sometimes includes surgery, braces, collars, or in mild cases exercises to tighten and stretch the neck muscles.

f. Clubfoot

This is a name given to deformity of the foot and ankle. There are three types; plautar flexion of the foot at the ankle so the foot points downward; incersion of the foot, which is the rolling in of the sole of the foot so that the soles of the feet face one another; forefoot, which is an extreme pigeon-toes deformity. It is most important that treatment is given as soon as possible so that muscles, tendons, and bones may grow normally. Treatment ranges from surgery, splints, casts, or simple manipulation of the foot. The activities to be used in a physical education class will depend upon the mobility of the student. Bowling, badmitton, archery, or simple tossing games are among the activities for the slow moving student.

5. The Cardiac Student

There are two main classifications of heard disturbances. The first is a functional disturbance. As a rule a functional discorder is a mild affliction. The rapidly growing adolescent whose heart has not kept pace in growth with the body often presents a functional murmur. This murmer generally clears up within a few years, provided care is taken to prevent undue strain through strengous ataletics.

The second classification is that of the organic disturbance. An organic heart lesion where there is a malformation of one or more of the valves is an example of an organic disturbance. This condition is not amendable to cure by physical exercise. The more serious organic heart cases are seldom encountered in the gymnasium or school. The program for those students must be planned on an individual basis. General conditioning exercises must be stressed throughout. There should be no activities which require a period of sustained muscle contraction. The program should also provide each student with sufficient (many) rest periods.



- 17 -

6. Visual Handicaps

All visual handicaps in a public school situation would be students with partial vision. These students should either remove their glasses or wear glass guards during physical education classes. Play areas should be large and uncluttered. For outdoor playing areas, hedges and shade trees are more desirable boundaries than fences or walls. Gymnasiums should be well-lighted.

GENERAL VALUES OF EXERCISES

The improvement of body mechanics has long been a recognized part of school physical education. The values of physical education for those with disabilities have tended toward an emphasis on exercise aimed at improvement of muscle tone. Exercise programs aimed at correcting alignment of the segments of the body and developing tones sufficient to maintain proper relationship of the various systems of the body result in increased physical efficiency and general well-being.

Exercise as therapy may serve many important needs. Among these are:

- 1. Strengthening individual and group muscles
- 2. Increase range of motion
- 3. Improvement in general coordination
- 4. Improvement in the general postural tone
- 5. Increase in general work capacity
- 6. Increase in general endurance
- 7. Improvement in cardiorespiratory efficiency
- 8. Greater efficiency in the activities of daily living
- 9. Help in establishing a better mental outlook
- 10. Improvement in ability to relax

The exercises in this guide for the various body mechanics problems and are by no means complete. They are merely illustrative of the kind of exercise that may be done to improve certain conditions.



A. Strengthening the Back

Do the exercises marked by the instructor. When the exercises are first started do exercise 1 of each group five times twice daily.

As each exercise becomes easier, the number of consecutive times it is repeated should be increased.

Group I. As it becomes possible to perform an exercise of this group 15 to 20 consecutive times. that exercise may be omitted and the next exercise on the list may be started.

- 1. Lie face down on bed or floor with the arms along the sides of the body:
 - a. Raise the head and shoulders and hold for a count of five.
 - b. Return slowly to starting position. Relax and then repeat
- 2. Lie in same position as in the preceding exercise:
 - a. Raise the arms as well as the head and shoulders upward and backward arching the back.
 - b. Return to the starting position. Relax and then repeat.
- 3. Lie face down on bed or floor with the hands clasped behind the head:
 - a. Raise head, shoulders and trunk, arching the back and hold for a count of five.
 - b. Return to starting position. Relax and then repeat.

Group II. As it becomes possible to perform an exercise of this group 15 to 20 consecutive times, then that exercise can be omitted and the next exercise on the list may be started.

- 1. Lie face down on bed or floor with the knees bent:
 - a. Raise the right thigh, keeping the knee bent and hold this position for a count of five.
 - b. Return slowly to resting position.
 - c. Raise the left thigh in the same manner and relax.
 - d. Repeat, raising the thighs alternately.
- 2. Lie face down on bed or floor with the knees straight:
 - a. Raise the right leg, keeping the knee straight and hold this position for a count of five.
 - b. Return slowly to resting position.
 - c. Raise the left leg in the same manner and then relax.
 - d. Repeat, raising the legs alternately.



- 19 -

Group II - Continued

- 3. Lie face down on bed and grasp the top of the bed with the hands:
 - a. Raise both legs, keeping the knees straight and hold this position for a count of five.
 - b. Relax and then repeat.

B. Abdominal Exercises

- 1. Sit up, Simple-Hook lying position, arms at side.

 Raise to a sitting position and slowly return to lying position.
- 2. Sit up, Advanced-Hook lying position, except hards are clasped behind the head.

Corse to a sitting position and slowly return to lying position. Repeat.

- Contractions Lying on back, knees bent, feet flat on floor (back lying position.)
 Contract the abdominal wall hold ten seconds and relax.
- 4. Leg Lifts Lying on back, legs extended, feet together, hands at the sides.

Raise legs so heels just clear the floor. Keep low back flat on floor by contracting the abdominals, spread feet well apart, bring feet together, lower to floor.

5. Knee Circles - Hook lying position, arms perpendicular to body.

Bring knees toward chest, tighten abdominals, keep low back as flat as possible. Circles should be done in six counts, place feet on floor and relax.

6. Head and Shoulder Lifts - Hook lying position, arms clasped behind the head.

Raise head and shoulders and scapula from the floor.
Hold for 15 counts.

7. Leg Lifts - Hook lying position.

Raise one knee to chest, then extend legs to a vertical position, lower slowly to floor. Alternate legs.

8. Leg Abducting - Lying on side with head supported on hand, other hand on floor supporting.

Raise top leg to four inches, lower and repeat.
Alternate legs.

C. Winged Scapula

- 1. Hook lying position with abdomen tucked and arms at sides.

 Extend the arms to an overhead position by sliding them along the floor. Return to starting position and repeat.
- 2. Standing position with arms at sides and head held straight. Extend arms to an overhead position by sliding them upward in the same manner as the previous exercise.
- Hook lying position with abdomen contracted and arms at sides.
 Extend right arm forward reaching for opposite knee picking shoulders off the floor.
- 4. Standing back to wall with arms straight at sides. Extend arms forward parallel to the floor. Reach as far as possible without losing contact with the wall. Shoulder being exercised should not be in contact with wall while reaching.
- 5. Hook lying. Extend the arm directly overhead perpendicular to floor. Lift shoulder off the floor reach as far as possible abducting scapula. Use weight as exercise progresses.
- 6. Standing position with the finger tips on shoulders. Elbows pointing forward. Extend forward as far as possible keeping fingers in contact with shoulder at the time keeping proper body alignment and have instructor add resistance to the elbow.
- 7. Facing wall weights and grasping handle, arms in front horizontal position. Move to overhead position.
- 8. Prone lying on narrow table, arms at sides hanging freely toward the floor at ninety degree angle grasping weights. Extend arms to a horizontal position.
- 9. Standing position with arms at sides holding weights. Shrug shoulders with weights in hands.
- Standing position facing eway from weight (wall) with arms in side-horizontal position. Draw arms to front horizontal position.



D. Forward Head

1. Sit with legs crossed hands on top of the feet and elbows held back.

Stretch the spine. Do not tip head back.

2. Stand tall against the wall.

Stretch the spine with the chest up, the chin in, extend the neck and push the head back.

- 3. Hold a stick or towel taut by its ends behind the head.

 Push head back against it.
- 4. Standing, fingers interlaced above crown of head.

 Push the head forward and upward and practice walking,
 emphasizing good upper back and neck extension. Keep
 elbows back but avoit hyperextension of the lumber spine.
- Cross sitting, hand dropped forward fingers interlaced behind the neck.

Push against moderate resistance given by hands, the head is moved up and back into a position of good extension.

6. Supine lying.

Raise the chest with upper back arched and support the weight of the trunk on the hips, the outstretched hands on the base of the skull.

- 7. Hook lying with the arms crossed on the chest.

 Push the head against the floor until the shoulders and the waist line are lifted slightly from the floor.
- 8. Prone lying with hands clasped behind the head. Raise the head from the floor only slightly against the resistance of the body weight of the arms. Keep chin in and elbows up.
- 9. Hook lying with hands at the sides.

Raise the body off the floor supporting the body weight on the hand and the feet. Keep the body alignment by keeping chin in.



E. Flat Back

Stride standing, trunk hanging toward tees.
 Extend to horizontal with hands at hips, upper back straight, shoulders well retracted. Relax trunk downward again.

Stride standing, trunk hanging toward toes.
 Extend spine to horizontal with hands at hips, upper back straight, shoulders well retracted, all weight to each hand, relax, turn trunk downward again.

3. Lower half of body on table, upper half hanging off; legs strapped or held down.

Extend the upper trunk to a horizontal position. Add weight to each hand as a progression.

4. Lying on face on floor.

Raise trunk and legs to even dive position. Relax.

5. Lie on stomach on a mat with the arms placed at the side, palms up.

Keep the hips and the shoulders on the floor. Slowly raise the right leg as high as possible, taking eight seconds to return to the floor. Repeat alternating legs.

F. Exercises for Scoliosis

- Long lying, right arm at side, left arm extended. Stretch left arm as far as possible and at the same time extend right arm toward the ankle, hold position. Reverse arm position and repeat exercise to other side.
- 2. Prone lying, arms extended overhead. Raise arms as far as possible from the mat.
- 3. Prone lying, left hand on rib cage. Draw left hip up (toward left shoulder) and stretch right arm overhead as the right leg is extended. Bend body slightly to the left. Reverse arm position and repeat exercise to opposite side.
- 4. Prone lying, hands behind neck. Left trunk slightly from the floor bend the trunk to the left, and return to center position; bend the trunk to the right, return to center position, lower trunk to the floor.



- 23 -

F. Exercises for Scoliosis - Continued

- 5. Long sitting, legs apart, one arm overhead, other arm across body. Bob trunk sidewards four times. Reverse position of arms and repeat exervise to opposite side.
- 6. Stand, facing wall, palms placed on wall at shoulder height. Wall fingers slowly up wall until the spine is stretched as far as possible.
- 7. On hands and knees with body close to floor. Creep forward on hands and knees. As the right knee swings forward the left hand extends forward. Continue exercise, alternating leg and arm movement.
- 8. Cross sitting or standing, hands behind the neck or arms sideward. Twist the trunk left and right. Repeat several times.
- 9. On hands and knees position on floor. Hollow the back by raising the head, maintain for a few seconds, return to normal position. Repeat exercise ten times.
- 10. On hands and knees position on floor. Pull in abdomen, while lowering the head, maintain for a few seconds, return to first position. Repeat.

G. Flat Foot (Pes-Planus)

- 1. Starting position Long sitting. Curl the toes. Relax.
- 2. Starting position Long sitting. Spread the toes and relax.
- 3. Starting position Sitting with feet resting on a stool or board with toes resting over edge (feet slightly inverted). Curl the toes over the edge of the board and then relax.
- 4. Starting position Sitting on a bench, heels on the floor, knees slightly flexed.
 - Dorsi-flex the ankle and invert the foot.
- 5. Starting position Standing or sitting. Pick up marbles or small objects with the toes and move them from one place to another.



G. Flat Foot (Pes-Planus) - Continued

 Starting position - Sitting on stock, hands supported behind on the stock, feet separated and parallel with a towel under the forefeet.

Grip the towell with the toes and slowly work it inward and backward until it makes a ball between the feet.

7. Starting position - Sitting with your weight recting on ankle and opposite knee.

Planter flex and invert the foot. Repeat with other foot.

- 8. Starting position Sitting on etool.

 Planter flex the ankle and raise the heels off the floor, lower heels to floor.
- Starting position Standing position.
 Walk in an exaggerated pigeon too step.
- 10. Starting position Standing.

 Walk on the outer boxders of the feet while turning the great toe inward.
- 11. Starting position Standing.

 Raise on to the ball of the foot, roll to the outer border, roll back onto the heel.

H. Foot Pronation

- 1. Standing. Walk thirty feet with heels raised and toes turned inward. Return.
- 2. Standing. Walk on outer borders of feet for thirty feet and return.
- 3. Standing. Walk on toes with the heels raised for thirty feet.
- 4. Standing. Wal on the heels for thirty feet.
- 5. Standing. Walk thirty feet with toes flexed and turned inward.
- 6. Walk thirty feet with a marble gripped by the great and second toes of each foot, major weight borne on heels, the outer borders and outer toes of the feet.
- 7. Sitting on atool, feet parallel on floor, legs extended forward. Cross right foot over left at the ankles and the toes and dorsiflex the feet and draw the toes toward the shins. Return to regular sitting position.



H. Foot Pronation - Continued

- 8. Standing at arm length distance from the wall, both palms on the wall at shoulder level and shoulder width apart. Keeping body in good alignment, bend ankles and elbows simultaneously forcing chest to wall until forearms are against wall. Heels must remain on floor. Return to starting position.
- 9. Long sitting with legs straight and together. A large towel folded lengthwise several times is under the foreparts of the feet and forcefully pull the ends of the towel toward the body. Hold for several seconds. Repeat.
- 10. Sitting on the stool, cross the feet, stand placing the weight on the outer borders of the feet. Repeat slowly.
- 11. Standing, feet parallel and a couple inches apart. Without raising heels, bend knees to half squat position. Hold several seconds. Repeat.

1. Knock Knee

- 1. Standing, heels apart, toes together. Rotate the knees outward vigorously, fully extended, keep feet on floor and raising the arches twist, relax.
- 2. Stride standing, hands at sides. Pigeon toes walk. Invert the toes across in front of opposite foot as fer as possible, making the leg twist rather than the hips. Alternate same position with opposite foot while walking approximately twenty feet at one time.
- 3. Standing with feet pointed straight ahead, knees locked. Extend knee well backwards, tense the quadriceps raising the knee cap, relax the muscles.
- 4. Sitting on stool. Cross one ankle over opposite knee. Push down on knee. Resistance is given by crossed leg. Hold and then relax. Repeat with other knee.
- 5. Sitting, heels six inches ahead of knees, marble in front of each foot. Grip marble in toes of left foot and bring ankle to rest on right knee, forcing left knee downward with left hand, lift left foot and replace heel to floor. Relax foot and release marble. Repeat v.th right foot.
- 6. Standing. Rotate feet and stand on outer borders, ankles inverted, return to standing position.

I. Knock Knee - Continued

- 7. Standing. Raise onto balls of feet. Rotate outward and lower on outer borders of feet. Return to standing position.
- 8. Standing. Raise on toes, force heels outward with toes clinging to floor, return the heels, return to standing position.

 Repeat slowly and forcefully.
- 9. Sitting on floor. Bring soles of feet together and toward body. Push down on both flexed knees.

J. Shoulder Tilt

- 1. Shoulder Raise Position Standing with shoulders level.

 Raise the low shoulder as high as possible without bending the trunk, relax and repeat.
- 2. Arm Raise Position Standing, arms at sides and shoulders level.

Stretch the arm of the low shoulder side as high as possible. Return to starting position and repeat.

- 3. Side Bend Position Standing with arms at sides.

 Raise the arm of the low side and extend it over the head toward the opposite side of the body.
- 4. Hang from bar Position Grasp the bar with both hands.
 While hanging gradually release the hand of the high shoulde:
 until hanging with one arm. Release and repeat.
- 5. Pull Over Position Supine lying, hands extended over head.

 Grasp a weight in the arm of the low shoulder and pull over the head, arm extended until it is parallel with the body and return to starting position slowly. Repeat.
- 6. Wide arm push up Position Push up position. Extend the arm of the high shoulder out from the body four inches, place the other hand in normal pushup position. Pushup with the normal arm position exerting the most effort.
- 7. Hanging leg raise Position Hanging from a bar.

 Raise both legs until they are at a right angle with the floor and slowly lower. Repeat.



K. Internal Tibial Torsion Gait

1. Standing roll-out - Position - correct standing, except feet four inches apart.

Planter flex toes, rolling the body weight well onto the outside of both feet. Hold for 30 seconds. Relax only back into correct alignment, not into abduction.

2. Standing, conscious correction - Position - standing in correct position.

Momentarily allow feet to relax into habitual pronation and abduction. Immediately recover correct alignment, being conscious of the outward pressure of the toes.

3. Three count walking - Position - correct standing position, facing a mirror, if available.

Place one foot forward on floor without changing body weight. Check its alignment. Transfer body weight to it, being sure the foot does not roll into pronation.

- 4. Line walking Position Standing astride of a line on the floor.

 Place heel forward barely touching outside of line. Drop forepart of foot to floor also barely touching outside of line. Step forward onto foot. Repeat with other foot.
- 5. Standing, foot lifts Position Standing facing a chair or wall or holding partner for balance, feet in good alignment.

 Pivoting on heels, curl toes under and raise forepart of foot from the floor. Hold this dorsi-flexed position using hand support as little as possible. Relax to correct foot alignment.
- Walking abduction position Standing.
 Walking in a straight line with the feet abducted.
- 7. Walking as a duck Position Bending over grasp the ankles with both hands.

With the feet turned out walk a distance of thirty feet while holding the ankles.

8. Foot flexion - Position - Standing or sitting.

Dorsi-flex the foot, abduct the foot and planter flex the foot to a three count exercise.



L. Tight Han strings

- 1. Front bender Standing position, arms are extended sideways from the shoulders and parallel to the floor. Bend from the waist and bob up and down to a three count exercise.
- 2. Wall bicycle Supine position, feet against the wall and hands above the head. Walk up the wall alternating feet wit's steps until the feet are fully extended.
- 3. Leg lifts Supine position with the hands grasped in back of the head. Raise the leg while keeping the knee straight through the range of motion to put a stretch on the hamstrings. Do not allow the hip to rotate.
- 4. Leg stretcher Standing on one foot, other foot resting on table, with the leg parallel to the floor. Bend forward at the hip, making an effort to touch the head to the knee. Change legs, grasp ankle and pull trunk down. Variation Sit on chair and extend leg over seat of another chair. Bend trunk forward over the knee.
- 5. Toe touch Stand with hips against wall, feet 4 inches from wall and 18 inches apart. Bend the trunk forward and touch the ground in front of the feet. Variation Move the feet closer together to increase difficulty.
- 6. Trunk bend Sitting position with hands grasping the knees. Keep the spine extended, flex the trunk forward.
- 7. Sit on the floor with legs extended, feet about 18 inches apart. Hold the toes of right foot with both hands. Bob up and down touching forehead to knee. Keep the knee extended. Repeat with the left leg.
- 8. Sit on 1100r with legs extended, feet apart. Hold arms crossed on the chest or behind the back. Flex the trunk forward from the hips. Lean back on the hands between each series of stretches.
- Standing feet together. Place the hands on ground as in front leaning position knees and elbows straight. Walk feet up toward hands bending at hips. Then walk hands forward away from feet.
- 10. Crouch sitting, hands on floor. Straighten the knees and back toes in, heels on floor. Bring left hand and foot forward at the same time, keeping heels on the floor and limiting arch. Repeat same with tight hand and foot.



M. External Tibial Torsion

1. Starting position - Sitting on a bench, heels six inches ahead of knees, marble in front of each foot.

Grip the marble in toes of left foot, bring ankle to rest on right knee. Force left knee down with left hand while lifting left foot. Replace heel to floor. Rest foot and release marble. Repeat with right foot.

2. Starting rosition - Standing, heels three inches apart, toes together.

Rotate knees outward vigorously, fully extended, keeping feet on floor and raising arches. Relax.

- 3. Starting position Stride standing with hands at sides.

 "Pigeon Toed Walk"- invert toe across in front of opposite foot as far as possible, making the leg twist rather than the hips. Alternate same position with opposite foot while walking twenty feet at one time.
- 4. Starting position Standing.

 Walk on the toes with the heels raised for a distance of thirty feet and return.
- 5. Starting position Standing.

 Walk a distance of thirty feet with a marble gripped by the great and second toe of each foot, major weight borne on the heels, outer borders and outer toes of each foot.
- 6. Starting position Standing, feet parallel and a few inches apart.

 Keeping heels on floor, bend the knees to a half squat position. Hold position for several seconds. Repeat.
- 7. Starting position Long sitting, towel folded lengthwise placed under foreparts of feet, ends held securely, one in each hand.

 Dorsi-flex the feet and forcefully pull the ends of the towel toward the body. Hold for several seconds. Repeat.
- 8. Starting position Standing.

 Walk a distance of thirty feet with toes turned inward and flexed,



PUBLIC RELATIONS

The importance of good public relations must be emphasized. We have no intention of moving into the medical areas of diagnosing and prescribing. It is merely our desire to evaluate and encourage students to achieve desired results after accepting the recommendations of physicians.

Parents must be kept informed as to the purposes and benefits of the program. Benefits will result from serving the needs of each individual student. Administrators and classroom teachers should understand the intent of this new approach to teaching physical education. Students must be made to realize that this is a means by which they can solve some of their own problems.

When a problem has been identified and is considered serious enough for individual instruction, the parents must be informed and the family physicians advice encouraged.

The following forms have been developed to promote a good public relations:

- 1. Letter to parents explaining the adaptive physical education program.
- 2. Letter to physicians explaining the program and asking aid in developing an individual program to meet the needs of the student.
- 3. Letters to parents requesting their consent for the student's participation in the program. (Permission Slip)
- 4. Check List to family physician requesting assistance in prescribing a specific program for the student.
- 5. Parental conference notice.



BIBLIOGRAPHY

Clarke, H. Harrison and David H. Clark

<u>Developmental and Adapted Physical Education</u>

Frentice Hall, Inc., Englewood Cliffs, N.J. - 1963

Daniels, Arthur S. Adapted Physical Education, Harper and Brothers, New York, 1954

Department of Education, Commonwealth of Pennsylvania, Guidelines for Adapted Physical Education. Department of Education, Harrisburg, Penna., 1966

Rathbone, Josephine L. and Valerie V. Hunt, Corrective Physical Education, W. B. Saunders Co., Philadelphia, Penna., 1966



- 32 -

GLOSSARY FOR ADAPTIVE PHYSICAL EDUCATION

Abduction A lateral movement away from the mid-line of the body.

Adduction A medial movement toward the mid-line of the body.

Antagonistic A muscle that acts in opposition to another Muscle

Anterior Sup- The arterior extremity of the iliac crest. erior Iliac Spine

Antaroposter- An exaggerated forward or backward curve of the spine.
ior Deviation

Anti-gravity Chiefly extensor muscles, the contraction of which supports the body against gravity, as in standing.

Articular That portion of the surface of a bone that forms a joint with Facet another bone.

Asymmetry Lack of similarity or correspondence of parts of the body.

Atlanto-occi- The articulation of the first cervical vertebra (atlas) with pital articu- the occiput.

Calcaneus The heal bone.

Cervical Ex- Apparatus for strengthening the posterior neck muscles. tensor Strength-ener

Clavicle The collar bone.

Condyle Any rounded eminence such as occurs in the joints of many of the bones, especially the femur, hemerus, and mandible.

"Curling" Rounding the upper back with approaching the sitting position Movement from the supine position.

Dorsal Pertaining to the back.

Dorsi- Flexing the ankle, thereby moving the foot toward the shin.

Dysmenorrhea Difficult or painful menstruation.

Eversion A. turning outward.

(foot)

Fabrocartilaginous have formed small masses of cartilage between the fibers.

Gastroc. The two which form the rounded calf of the leg. soleuns Muscles

Gluteal Cleft The division between the buttocks.

Greater Tro- The ball on which the hip bone turns in its socket. chanter of the Femur

Hock-Lying Lying on the back with the kness flexed and the feet on the floor near the buttocks.

Hyperextension Overextension of a part of the body.

Intervertebral The cartilage between the bodies of the vertebrae.

Disk

Inversion The act of turning inward. (foot)

Kyphosis A posterior exaggeration of the dorsal curve (upper back) of the spine.

Kypholordosis A combination of kyphosis and lordosis.

Lateral At, belonging to, or pertaining to the side.

Lateral Devia- A curvature of the spine which forms an "O" or an "S" tion from side to side.

Later 1a Tilt A turning of the shoulder blades on their vertical axes so (scapulas) that the vertebral borders protrude from the back.

Lordosis An exaggeration of the curve in the neck (cervical spine).

Cervical

Lumbar An exaggeration of the curve in the lower back (lumbar region).

Malleolus A projection of either bone of the lower leg where it joins the ankle.

Medial

Internal, as opposed to lateral (external).

Patella

The knee cap.

Pedograph

A device for taking foot prints.

Pelvic Tilt

See tilted pelvis.

Peroneal

The muscles on the external aspect of the lower leg.

Plantar Flex (feet)

Muscles

Extending the foot toward the plantar or undersurface of the feet.

Podiascope

A device for viewing the soles of the feet.

Popliteal Space The posterior part of the knee joint, referred to as the ham of the knee.

. Posture Grid A frame to which are attached parallel horizontal and parallel vertical cords. The posture grid is used to determine anterposterior and lateral deviations of the spine.

Pronation (feet)

A position of the feet in which the foot is rotated around its length axis. When standing, most of the body weight is borne on the inner borders of the feet. Pronation is accompanied by abduction and toeing outward (eversion).

Prone Lying

Lying on the fron surface of the body.

Quadriceps Extensors The large muscles on the front of the thigh.

Resisted Exercise An exercise movement in which the desired muscle action is resisted by another force. In most cases, the resistance is given by another person, a small weight, or a spring.

Rotated Pelvis Rotation refers to the movement of a segment of the body around a vertical axis. The movement may be either clockwise or counter-clockwise. Viewing the pelvis from above and in front, and considering a plane passing through the pelvis, a rotation forward on the right would be a counter-clockwise rotation; a rotation on the left would be a clockwise rotation.

Round Shoulders A deviation in which the tips of the shoulders assume a forward position. Kyphosis usually accompanies this deviation.

Scapula

A shoulder blade.

Scapular Ad-

An apparatus for strengthening the middle trapesius and rhom-

ductor

boids (posterior shoulder muscles) and the posterior neck

Strength-

muscles. ener & Cervical Extensor

Scoliosis

A lateral deviation of the spine.

Short leg

A condition in which one leg is shorter than the other. Ιt

is conducive to scoliosis.

Shoulder

The scapulse, clavicles, and sterrum.

Girdle Shoulder Joint

The articulation of the head of the humerus with the glenoid

fossa of the scapula.

Spine Extension MotiA piece of apparatus with an inverted scale for measuring the distance an individual can extend his spine.

vator

The breast bone.

Sternocla-

Sterum

The articulation of the sternum with the clavicles.

vicular Articulation

Supination (foot)

A position of the feet in which the foot is rotated outward around the length axis. When standing, most of the weight is borne on the outer borders of the feet. Supination is accompanied by inversion (toeing inward) and adduction.

Supine Lying

Lying on the back.

Symmetry

A harmonious correspondence of parts of the body.

Symphysis Pubis

The fibrocartilaginous union of the pubic bones.

Tendon of

Achilles

The tendon of the gastrocnemius and soleus muscles which terminate in the calcaneus or heel bone. This tendon is sometimes referred to as the 'heel cord." In its normal state, it

is straight.

Thoracic

That portion of the trunk above the diaphragm and below the neck.

Tiltad Pelvis

An anterior pelvic tilt is present when the anterior superior spines of the ilia have moved downward and forward from the normal position. A posterior pelvic tilt is present when the anterior superior spines of the ilia have moved upward and backward from the normal position. (The normal position of the pelvis, as defined by some authorities, is that in which the anterior superior spines of the ilia and the symphysis pubis are in a vertical plane).

Tilted Scapulae A turning of the scapular on their horizontal exes with the result that the inferior angles protrude from the back.

Vertebral Border (Scapula) The side of the scapula that is nearest to the spine.

Vertebral Column The spinal column.

APPENDIX

PHYSICIAN'S CERTIFICATION LETTER

We shall appreciate your coop	peration in filling out this blank for your in regard to physical education activities.
Please return promptly.	
attend courses of instruction to be adapted to meet the nee who is unable to participate i	vania schools are required by school law to in physical education. These courses are ds of the individual pupil. Thus, a pupil n a whole program, due to a specific physion his/her program modified to meet and/or
interest of the student to avoid for prolonged or unspecified on the continuity excuse, you indict of activity in which the child	ool District believes that it is in the best id blanket medical excuses, particularly periods of time. If, instead of a general ate below the length of time and the type can participate, the school will attempt to through the recently initiated Adaptive
Physician's Check	List (Modified Prog. 3m)
This certifies that I have car	efully examined
because of	y in phases of physical education checked 19to19
Apparatus Exercises Suspending body weight Supporting body weight	Combatives (arm & leg, Wrestling, etc.)
Calisthenics Limited Active	Jumping Lifting Rhythmical Activities Table Games, Singing Games, etc. Throwing (beanbags, darts, bowling) Tumbling & Stunts Track & Field Team Activities (soccer, touch football, hockey, basketball, softball)
Remarks: (Physician)	
Date: P	hysician's Signature
Parents Note: - Please send permission slip to the school	this signed form together with your child's nurse.



Physician's Check List (Remedial Program)

Please note below suggested phy-	sical education activities for atly under my professional car	re.
Name	•	
Corrective Exercises For: Liz	mitations and Comments:	
Kyphosis		
Lordosis		
Scoliosis		
Foot Deviation		
General Posture		
Head Tilt		
Hip Tilt		
Leg Deviation		
Knee Impairment		
Shoulder Deviation		
Other		
Parents Note: - Please return		
this signed form together with	Physician's Signature	Date

the school nurse.

Dear Parents:

The School Laws of Pennsylvania specify that all students attending the public schools receive instruction in the subject of physical education. This course is to be adapted to meet the needs of each pupil. Thus, in addition to the regular physical education classes, there is now a corrective and modified physical education program available in the Bensalem Township Elementary Schools for children with physical handicaps.

During the next few weeks, all children in kindergarten and first grade will be examined by the school physician. The remaining students in grades two through five will be screened by the school nurses and the physical education staff for possible postural deviations. All girls will be screened by female instructors and all boys by male instructors.

If you have any questions please call me at the Samuel K. Faust Elementary School.

Sincerely,

Robert M. Muller, Instructed Adaptive Physical Education

RMM:dj



Dear Doctor	;
-------------	---

The Elementary Schools of Bensalem Township have initiated an adapted program in physical education to meet the needs of our students. The program has been established and will be programmed to meet the needs of those children who cannot participate in the regular physical education activities. It also includes those children with posture or gait problems.

Our immediate goal is to identify children we think will need a special program. The children will be screened through medical examinations given to kindergarten and first grade students, and a posture evaluation test administered by the school nurses and elementary physical education staff in grades two through five.

Your ideas and suggestions will be greatly appreciated and will be used in planning a program.

Sincerely,

Robert M. Muller, Instructor Adaptive Physical Education

RMM:dj

